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Wi-Fi access points (hotspots), e.g. points near a train station, (d) and/or all operator hotspots in a given geographical area, for example.

[0052] After changing the access rights, AAA server (**230** and **240**) may be able to utilize the new authentication and authorization policies as a part of hotspot authentication.

[0053] AAA server (**230** and **240**) may keep temporary access rights valid until otherwise told (e.g. by Wi-Fi Offload Manager **210**) or after a predefined time (e.g. 30 minutes). The predefined time may also be determined by Wi-Fi Offload Manager **210**), for example.

[0054] In certain embodiments, ANDSF server **220** that provides network discovery and selection policies to user devices may be used to ensure user devices find and connect automatically to nearby hotspots of which the users have access rights. In case temporary access right credentials are given to the user (like temporarily valid username/password/PIN code), this may be included into ANDSF messaging with the user device or configured separately, for example, by using Device Management based mechanisms.

[0055] For example, ANDSF server **220** may define operator hotspots and their selection rules for users who have subscriptions to Wi-Fi service of the operator. As such, devices may proactively use Wi-Fi when available. ANDSF server **220** can, for example, define:

[0056] A priority list for different networks. For example, ANDSF server **220** may tell a user device to automatically use an operator hotspot with SSID=A when available. If the operator hotspot with SSID=A is not available, then the user device may be told to use a roaming partner hotspot with SSID=B. If the roaming hotspot with SSID=B is not available, then the user device may be told to use a mobile network.

[0057] Details for network selection such as, for example, time-of-day or location-based criteria. This may enable, for example, the offloading of traffic to a hotspot with SSID=A near a train station (and during a busy hour).

[0058] Thus, when access rights affecting certain user(s) are changed for a hotspot, a network discovery/selection tool may ensure that selected user devices start utilizing the hotspots automatically.

[0059] In one embodiment, a new SSID (SSID=c) may be created to a Wi-Fi AP when condition, like cell congestion, occurs. Network discovery and/or selection rules for the new SSID (SSID=c) may be configured to user devices beforehand or when a condition occurs, for example by using ANDSF or Device Management. Then Wi-Fi Offload Manager may trigger Wi-Fi access rights management for the new SSID=c to allow only selected users or all users to access the new SSID. As a result, for example when mobile cell congestion occurs near train station, new SSID may be created to train station APs allowing selected/all users in train station to connect to the Wi-Fi network.

[0060] Referring to FIG. **3**, certain embodiments of the invention may operate as follows:

[0061] At **300**, a Wi-Fi Offload Manager detects congestion on a 3G network around a train station during a busy hour in the afternoon.

[0062] At **310**, the Wi-Fi Offload Manager triggers an access rights management change affecting Wi-Fi hotspots near the train station. The Wi-Fi Offload Manager may tell an AAA server to allow all of an operator's own subscribers (with MCC/MNC or with defined

access credential realm like @operator.com) to access selected hotspots. The AAA server learns the hotspot locations during authentication, e.g. based on IP address, MAC address, physical connection information (like L2 connection), Virtual LAN identifiers (VLAN), or location information (like GPS coordinates) or alike.

[0063] At **320**, the Wi-Fi Offload Manager triggers a network discovery/selection tool to configure new network selection policies to user devices or all compatible user devices in the area to ensure that these user devices start offloading traffic to train-station hotspots

[0064] As a result, at **330**, a portion of traffic is offloaded to Wi-Fi, including subscribers who typically do not have access rights to Wi-Fi service. Such offloading improves the user experience for an operator's subscribers and leaves more resources on the mobile network.

[0065] As an option, the operator may integrate Wi-Fi access with a packet core network so as to be able to perform charging and policy control with offloaded traffic from the packet core network. In such a case, a user profile in HLR/HSS/PCRF/alike may need to be changed to allow Wi-Fi access and service.

[0066] As an option, the operator may apply services like Lawful Interception, Policy Control, Charging, Deep Packet Inspection etc. to Wi-Fi traffic even if not integrating the traffic to packet core network. In such a case, a user profile in BRAS/BNG/PCRF/alike may need to be changed to allow Wi-Fi access and service.

[0067] FIG. **4** illustrates an apparatus **10** according to another embodiment. In an embodiment, apparatus **10** may be an Offload Manager. In other embodiments, apparatus **10** may be a device receiving communication from an Offload Manager.

[0068] Apparatus **10** includes a processor **22** for processing information and executing instructions or operations. Processor **22** may be any type of general or specific purpose processor. While a single processor **22** is shown in FIG. **4**, multiple processors may be utilized according to other embodiments. In fact, processor **22** may include one or more of general-purpose computers, special purpose computers, microprocessors, digital signal processors ("DSPs"), field-programmable gate arrays ("FPGAs"), application-specific integrated circuits ("ASICs"), and processors based on a multi-core processor architecture, as examples.

[0069] Apparatus **10** may further include a memory **14**, coupled to processor **22**, for storing information and instructions that may be executed by processor **22**. Memory **14** may be one or more memories and of any type suitable to the local application environment, and may be implemented using any suitable volatile or nonvolatile data storage technology such as a semiconductor-based memory device, a magnetic memory device and system, an optical memory device and system, fixed memory, and removable memory. For example, memory **14** can be comprised of any combination of random access memory ("RAM"), read only memory ("ROM"), static storage such as a magnetic or optical disk, or any other type of non-transitory machine or computer readable media. The instructions stored in memory **14** may include program instructions or computer program code that, when executed by processor **22**, enable the apparatus **10** to perform tasks as described herein.

[0070] Apparatus **10** may also include one or more antennas (not shown) for transmitting and receiving signals and/or data to and from apparatus **10**. Apparatus **10** may further